[useAMS,usenatbib]mn2e graphics,rotate

Chandra observations of the galaxy cluster Abell 1835

[Schmidt, Allen & Fabian] R. W. Schmidt,E-mail: rschmidt@ast.cam.ac.uk (RWS), swa@ast.cam.ac.uk (SWA), acf@ast.cam.ac.uk (ACF) S. W. Allen and A. C. Fabian

Received

firstpage–lastpage

document

firstpage

abstract

We present the analysis of 30 $ksecof Chandraobservationsofthegalaxyclusters Abell1835.Overall, theX-rayimageshowsarela$
$raygastemperaturefrom\sim12\, keVintheouterregionsoftheclusterto\sim4\, keVinthecore.TheChandradataprovidetightconstrain$
$Navarro97model.TheX-raydataallowustomeasuretheX-raygasmassfractionasafunctionofradius, leadingtoadetermin$
$0.40\pm0.09\, h_{50}^{-0.5}$. The projected mass within a radius of $\sim150\, kpcimpliedbythepresenceofgravitationallylensedarcsintheclus$
$raygasinthecentreofAbell1835ofabout3\times10^8\, yr.Coolingflowmodelfitstothe Chandraspectrumandadeprojectionanalysisof$
$6\times10^8\, yr)withanintegratedmassdepositionrateof230^{+80}_{-50}\, M_\odot\, yr^{-1}$ within a radius of 30 $kpc.Wediscusstheimplicationsofour$